

In the Abstract

Please amend the Abstract as follows:

A method is disclosed for designing two separable filters, **LPP** & **HPP**, that, when applied in sequence with a subtraction step, approximates the circularly symmetric frequency response achievable using a non-separable filter. The method of the present invention comprising: First, (a) selecting selects a cut-off frequency and designing therefrom a 1-D low pass filter **LP** such that: $LP = [X_{-n}, X_{-(n-1)}, \dots, X_0, \dots, X_{n-1}, X_n]$. Next, (b) the method obtains obtaining a low pass 2-D filter **LPP** by performing the operation: $LP^* \times LP$; wherein **LP*** is a column vector having the same entries as **LP** and **LPP** having dimensions given by: $\{2n+1, 2n+1\}$; and generating generates a 2-D contour plot therefor. The method designs Next, (c) designing a 1-D high pass filter **HP** such that: $HP = [Y_{-m}, Y_{-(m-1)}, \dots, Y_0, \dots, Y_{m-1}, Y_m]$. Next, (d) obtaining and obtains a 2-D high pass filter **HPP** by performing the operation: $HP^* \times HP$; wherein **HP*** is a column vector having the same entries as **HP** and **HPP** having dimensions: $\{2m+1, 2m+1\}$ and obtaining a 2-D contour plot therefor. A Next, (e) repeating (c) through (d) until the 2-D contour plot of **HPP** overlaps the 2-D contour plot of **LPP**. Next, (f) generating a 2-D filter is generated **ONE** having the dimensions of that of the 2-D high pass filter **HPP** with the only non-zero entry of value 1 located at the center of **ONE**. A Next, (g) creating matrix is created **HPPinv** by subtracting the 2-D high pass filter **HPP** from the 2-D filter **ONE**. The low pass 2-D filter is convolved Next, (h) convolving **LPP** with **HPPinv** the matrix to obtain **DSCRN** having dimensions: $\{2m+2n+1, 2m+2n+1\}$; and obtaining a 2-D contour plot therefor. Next, (i) repeating (a) through (h) until, by an examination of the 2-D contour plot of **DSCRN**, an approximation to a desired circular symmetry is achieved.